

Time : 3 Hours

Max. Marks: 75

(No additional sheet will be supplied)

PART – A (5 x 3 = 15 marks)

Answer any FIVE Questions

Each question carries 3 marks

Each answer should not exceed 1 page

1. Different layers of the Atmosphere
2. Explain Plank's Law
3. Explain how the wind speed and velocity is measured using an automatic weather station
4. Explain the basic principle of atmospheric pressure measurement
5. What are the sources of aerosols?
6. Explain primary gas pollutants.
7. Sketch the block diagram of FM-CW radar.
8. Explain the applications of a wind profiler.

PART – B (4 x 15 = 60 marks)

Answer ALL Questions

Each question carries 15 marks

Each answer should not exceed 6 pages

9. Explain the composition of the atmosphere. Give detailed note on the energy balance of earth and atmosphere.
(OR)
10. Explain the block body radiation. Write about the significance of Plank's Law, Stefan Boltzmann Law and Wien's displacement Law in the atmospheric physics.
11. Explain the estimation of thermodynamic parameters using GPS sonde.
(OR)
12. Explain the working of space borne systems for the measurement of meteorological parameters.
13. Write a detailed note on the gaseous pollutants measurement techniques.
(OR)
14. Explain the working of multi wave length solar radiometer for aerosol monitoring.
15. Explain the working principle of pulsed Radar with neat illustrations.
(OR)
16. Write a detailed note on the radar scattering theory.

